


MONITOR UNIT MU-201CE/MU-231CE OPERATOR'S MANUAL

This manual describes only the key operations of the monitor unit MU-210CE/MU-231CE. For other details, refer to the installation manual and operator's manual of the ECDIS/radar.


1. Overview

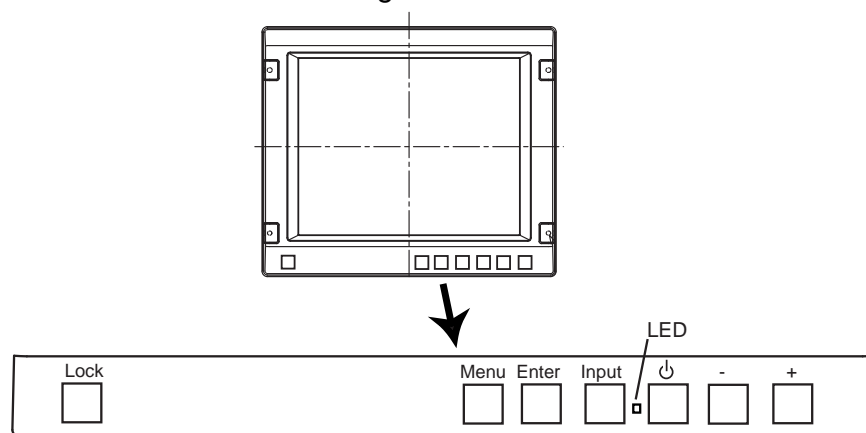
When the monitor unit MU-201CE or MU-231CE is connected to a radar/ECDIS with an RS-232C cable, the keys on the panel are locked, so independent operation of the keys is not possible. Brilliance is controlled from ECDIS/radar.

Key function under lock condition

- Simultaneous pressing of Lock and Menu keys: Opens/closes the menu.
- Simultaneous pressing of Lock and Input keys: Choose an input signal.
- Simultaneous pressing of Lock and  keys: Turns the power on or off. To turn it off, press more than five seconds.

The keys are unlocked with menu operation. See "Keypad lock" on page 6. The key functions under unlocked condition are as follows.

-  key: Turns the power on or off. To turn the power off, press it more than five seconds.
- + and -: Adjusts the screen brilliance when no menu displayed. With menu displayed, these choose an item from the menu.
- Input: Chooses input signal to display (when no menu is displayed).
- Menu: Opens or closes menu.
- Enter: Confirms menu setting.



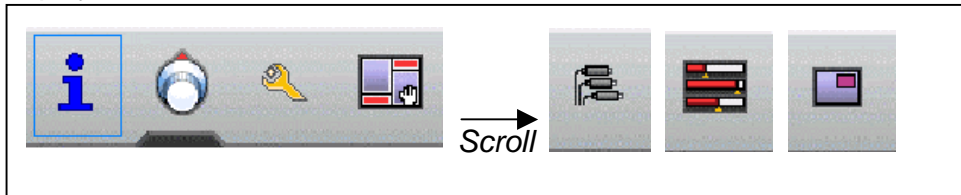
Operation Panel

LED lamp: lights when the monitor unit is turned on.

2. Menu Operation

1. Press the Menu key to open the main menu.

The chosen menu item is circumscribed with a blue rectangle and its sub-menu is displayed below the main menu.



2. Press the + or – key to choose a menu and press the Enter key.
 3. Press the + or – key to choose a sub-menu item and press the Enter key.
- There are four kinds of items available in each sub-menu. A brief explanation of each follows.

<div style="border: 1px solid black; padding: 5px; background-color: #cccccc;"> <p>Factory Defaults</p> </div>	<p>Keys</p> <p>They just need to be confirmed for selection in order to activate the corresponding function. The key in this example will perform factory defaults restore as soon as selected.</p>
<div style="border: 1px solid black; padding: 5px; background-color: #cccccc;"> <p>Freeze Frame</p> <p><input type="radio"/> Off <input checked="" type="radio"/> On</p> </div>	<p>On/off settings</p> <p>They just need to be confirmed for selection in order to toggle between the on and off state of the option. The setting in this example will toggle between normal mode and freeze frame mode as selected.</p>
<div style="border: 1px solid black; padding: 5px; background-color: #cccccc;"> <p>Serial Mode</p> <p>RS 232</p> </div>	<p>Item lists</p> <p>Once activated, these items allow the user to select a given mode of operation among the ones available by pressing the + or – key and then Enter key.</p>
<div style="border: 1px solid black; padding: 5px; background-color: #cccccc;"> <p>Backlight 12 %</p> <p><input type="range" value="12"/></p> </div>	<p>Gauges</p> <p>Once activated, these items allow the user to change the setting at will between zero and one hundred percent by pressing the + or - key and then Enter key.</p>

4. To change other item in the sub-menu, return to step 3.
5. Press the Menu key to conclude sub-menu setting.
To change the setting of another menu, go to step 2.
6. Press the Menu key to close the main menu.

3. Menu Functions

This section of the manual describes each function of each menu in detail. Each paragraph represents a given menu. On the left, an image shows all items that can appear in that menu, while on the right an item by item description is given, in the same order as shown at the screen. Each paragraph is named after the menu it represents, and the icon for that menu is shown near the menu name. Please note that the numeric values shown in the boxes are meaningless and do not represent values that are meant to be valid. When using the equipment, the GUI will allow or disallow some values to be entered depending on the current conditions.

Also note that no item is shown as selected. Although every possible item is shown in the images, not all of them may be shown on the equipment's GUI when using it, because each item is shown only if certain conditions are met.

Information menu



Input resolution

This box shows details of the signal that is currently displayed. The values shown are: horizontal resolution (pixels), vertical resolution (pixels) and vertical refresh frequency (Hz). The content of this box cannot be changed.

Detected mode

The value displayed in this box cannot be changed and informs the user about the numeric identifier associated with the signal displayed. This is useful to establish if two given input signals have identical parameters or not.

Firmware version

This box cannot be selected, and its value cannot be changed. It informs the user about the version of the firmware programmed into the monitor.

Main window image settings



Backlight

Adjust the intensity of the backlight of the display. This is automatically adjusted by radar/ECDIS.

LED level

Adjust the intensity of the LED on the front panel.

Brightness

Make the picture brighter or darker.

Contrast

View dark details on dark backgrounds. This setting should be adjusted after the brightness so as to make the white color as bright as possible without interfering with grays.

Sharpness

Make the picture more or less detailed. More detailed pictures are clearer but introduce some picture noise, while less detailed pictures are slightly blurred but have reduced noise.

Gamma correction

Choose the chromatic response of the display. In particular, "linear" should be used with flat panel LCD displays.

Color temp

Make the picture warmer or colder by changing the white temperature. The value is expressed in Kelvin.

Red, green and blue temp

Change the quantity of red, green and blue that the image contains.

Scaling mode

Choose how to view signals with an aspect ratio different from that of the display. The "one to one" mode displays the signal without scaling. The "fill all" mode stretches the picture so the whole screen gets filled; this may make the picture squashed or stretched. The "fill to aspect ratio" mode makes the input signal fill the screen but without squashing or stretching, maintaining the aspect ratio of the input signal. Use the default setting.

After installation or execution of Factory defaults (page 6), set the brightness, contrast, and red/green/blue temperatures as follows.

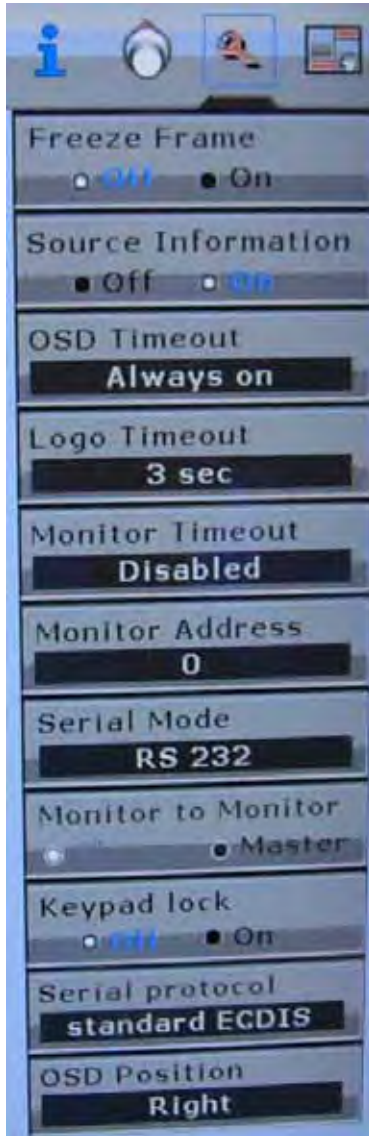
MU-201CE

Brightness	43%
Contrast	60%
Red temp	50%
Green temp	67%
Blue temp	65%

MU-231CE

Brightness	43%
Contrast	55%
Red temp	50%
Green temp	67%
Blue temp	65%

General monitor settings



Freeze frame

This function, when activated, freezes the image on the screen, disregarding the input signal until deactivated.

Source information

This setting allows the user to disable the source information that appears on the upper left hand corner each time a source is detected or Input key is pressed. Always use On state.

OSD timeout

Choose how much time the GUI will remain displayed on the screen when no control is being used. When the user is not touching the monitor controls, this timer will, after the selected period of time, remove the GUI from the screen.

Logo timeout

Choose how much time the logo will remain on the screen when the display is powered. The "Disabled" option will make the display skip the logo display at start up.

Monitor timeout

Choose how much time the monitor will remain powered when the user is not touching its controls. The "Disabled" setting disables this feature. After the selected time has passed and the user has not touched the monitor controls, it will automatically power off. Set to "Disabled" for radar/ECDIS.

Monitor address

Choose to which address the monitor should respond when ECDIS commands are detected over the serial link.

Serial mode

Choose what kind of serial bus is connected to the monitor. Use the default setting (RS 232).

Monitor to monitor

Choose whether the display initiates an ECDIS transmission towards the other displays connected to it when the user tries to adjust the backlight level. In "Slave" mode, the monitor never initiates ECDIS transmissions on its own. In "Master" mode, the monitor issues an ECDIS command over the serial link each time the backlight is changed. This function is only available if serial mode is set to 422 or 485.

Keypad lock

Set whether the keypad is locked or not. When locked, the keypad does not answer to user commands, unless the LOCK key is pressed together with a desired key. If the monitor is connected to radar/ECDIS with an RS-232C cable, Off returns to On after turning the power off and then on.

Serial protocol

Choose how the equipment will respond to ECDIS commands. In Standard ECDIS mode, the equipment will be compliant with the ECDIS specification, while in ISIC ECDIS mode the values are transmitted in decimal representation and are scaled to a percentage range.

OSD Position

Choose if the On Screen Display is shown on the right or left side of the monitor.

User preferences



Factory defaults

This function provides a reset of the monitor to the factory defaults. By activating this function, all settings made by the user will be lost and the monitor will be brought back to known operating conditions.

Setup selection

This setting allows the user to select which user slot to handle with the Save monitor setup and Recall monitor setup keys.

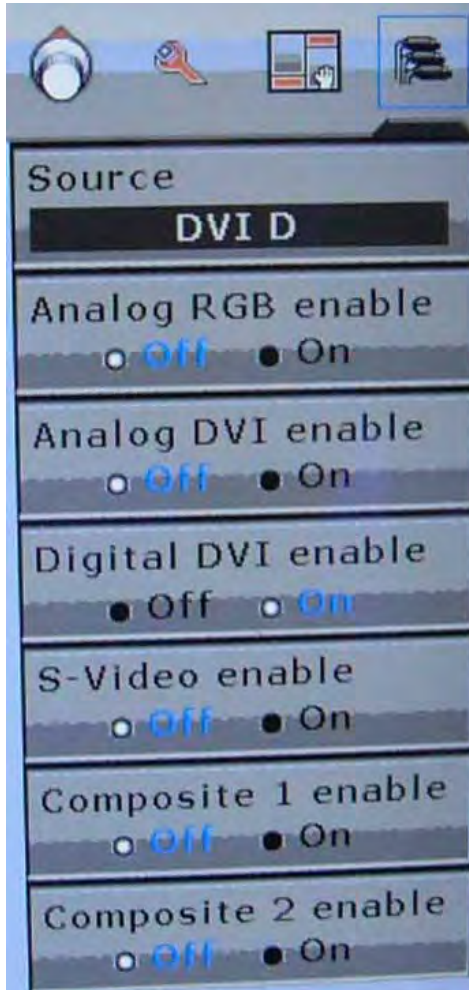
Save monitor setup

This function allows the user to save all important current settings to a memory for later recall. There are three slots available; which one is used to store the settings depends on the Setup selection menu item. Saving settings in a slot that contains previous settings will overwrite the old settings to store the new ones.

Recall monitor setup

This function allows the user to recall the settings stored with the Save monitor setup push key. Which setting is recalled depends on the Setup selection menu item.

Input selection



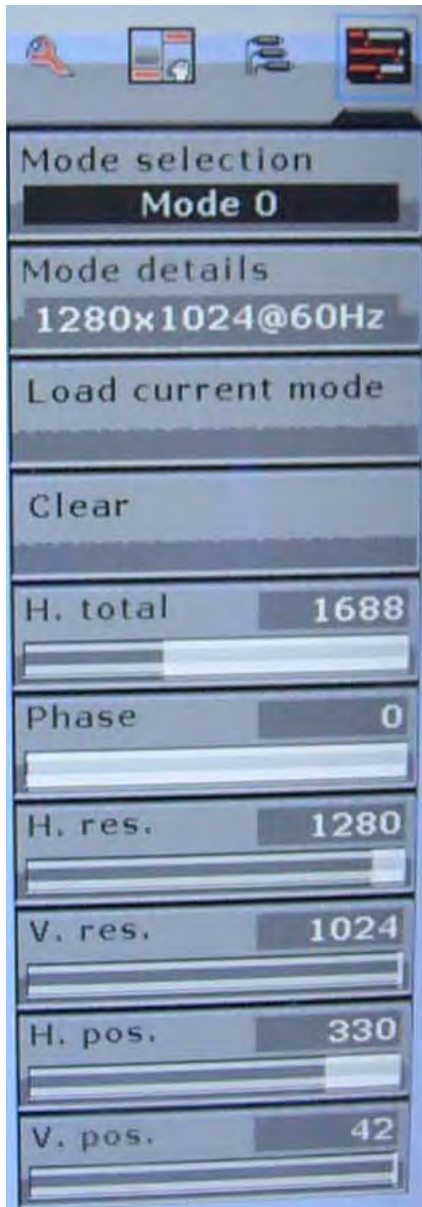
Source

Choose the input source for the main screen. As soon as a change is made here, the corresponding input will be selected and activated for display on the main screen. To change the active source for the PIP window, use the PIP menu.

Source enable items

These menu items allow the user to disable some sources. When a source is disabled (set to Off), it cannot be selected by means of the Input key on the monitor's keypad.

Main screen acquisition settings



This menu is available when PIP is set to ON.
(See next page.)

Mode selection

Choose a memory slot in which to store display parameters for a given input signal. Once stored in a memory slot, the settings for the current input signal can be modified at will, and they will be reapplied when the same source is detected again.

Mode details

This box shows what's inside the memory slot selected with the Mode selection setting.

Load current mode

This stores the settings detected by the image processor for the current signal in the memory slot selected with the Mode selection setting.

Once the detected parameters have been stored in memory, they can be edited by the user with the controls described below.

Clear

Press this key to delete the contents of the selected memory slot. Once the content of a given slot has been deleted, it is lost and cannot be retrieved.

H. total

Adjust the frequency of the clock signal used to drive the analog to digital converter that samples the input signal.

Phase

Adjust the phase of the clock used to drive the analog to digital converter that samples the input signal.

H. res. and V. res.

By means of this setting, the user is able to force the image processor into detecting the current signal with a given horizontal or vertical resolution.

H. pos. and V. pos

These two settings allow the user to move the input signal around on the main screen, so it is displayed correctly in its entirety.